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13 October 1966

MEMORANDUM FOR THE RECORD

SUBJECT: Cadmium Plate Restriction
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1. Cadmium plating process is very rigid and inflexible in relation to temperature changes. At temperatures above 400°F cadmium resists granular growth therefore causing stress, corrosion or cracks. This is applicable to all base metal surfaces which has cadmium plate and exceeds 400°F.

2. The use of hand tools on bolts and nuts with cadmium plated surfaces causes regular and frequent flaking action of the plated surface. This flake will travel with the hand tool and deposit on the next surface. If that surface is titanium or structure which exceeds 400°F then stress cracks occur.

3. To preclude an epidemic type of contamination to titanium structure the design criteria was established by LAC to forbid use of cadmium plate. This is a new industry design restriction which now applies to all high temperature structural components.

4. Use of cadmium plate on electronics systems which are self contained within a metal box not plated is still being accepted. Those plated surfaces cannot be in contact with titanium structure and are not to be items adjusted on the aircraft with common hand tools. Those tools which become contaminated must be decontaminated before subsequent use on or around the airframe.

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Major USAF
Maintenance Division, D/M

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MD/M/OSA ☐

Distribution:

- #1 - ASD/OEL
- #2 - D/M/OSA (Chrono)
- #3 - RB/OSA

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